

Review of some New World aphodiine genera and descriptions of new species (Coleoptera: Scarabaeidae: Aphodiinae)

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Abstract. The New World eupariine scarab genera *Euparixoides* HINTON and *Iguazua* STEBNICKA are reviewed. *Saprosites blackwelderi* CHAPIN, is transferred to the genus *Iguazua* becoming *Iguazua blackwelderi* (CHAPIN), new combination. Keys for species of the genera *Euparixoides*, *Iguazua*, and *Lomanoxoides* STEBNICKA are presented. New species described are: (Eupariini) *Euparixoides papilio*, *Euparixoides araguaensis*, *Euparixoides tachirensis*, *Lomanoxoides mapitunari*, *Lomanoxoides herediae*, *Iguazua costaricensis*, *Auperia waoraniae*, *Auperia tectipennis*, *Auperia viejoae*, and (Didactylini) *Aidophus coheni*.

Key words: Scarabaeidae, Aphodiinae, *Euparixoides*, *Lomanoxoides*, *Iguazua*, *Auperia*, *Aidophus*, taxonomy, new species, New World.

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INTRODUCTION

Research on previously unrevised genera of New World Aphodiinae continues and other major studies on the New World aphodiine fauna are nearing completion. However, new species continue to be discovered in groups recently revised. This paper covers a few of those new discoveries.

Materials studied are deposited in the following collections:

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| CMNC | Canadian Museum of Nature, Ottawa |
| CNIC | Canadian National Insect Collection, Ottawa |
| FSCA | Florida State Collection of Arthropods, Gainesville, FL |
| INBI | (InBio) Instituto Nacional de Biodiversidad, Santo Domingo de Heredia, Costa Rica |
| HAHC | Henry and Anne HOWDEN collection, Ottawa |
| ISEA | Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Kraków |
| LSUC | Louisiana State University, Baton Rouge, LA |
| MAIC | Michael A. IVIE collection, Montana State University, Bozeman MT-USA |
| MHNG | Museum d'histoire naturelle in Geneva |

MMU	Manchester Museum, The University, UK
PESC	Paul E. SKELLEY collection, Gainesville, FL
PNUQ	Politencia National University, Quito, Ecuador
SEMC	Snow Entomological Museum, Kansas University, Lawrence, KS-USA
TAMU	Texas A&M University, College Station, TX
USNM	United States National Museum of Natural History, Washington, DC

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EUPARIINI

Genus *Euparixoides* HINTON, 1936

Type species *Euparixoides cribratus* HINTON, 1936: 275-276, by monotypy.

D i a g n o s i s. Eupariini with the following characters: body less than 4.0 mm in length; mesocoxae widely separated, elongate and touching elytral epipleuron, coxa cavities nearly parallel; clypeal and pronotal margins crenulate; meso- and metatibial apices with single spur, or second spur greatly reduced; tarsi tapering, short, about half length of tibiae; elytra laterally inflexed, with hair-like setae on the apical declivity.

R e m a r k s. *Euparixoides* presently includes five, presumed myrmecophilous species inhabiting Central America and northern South America. They are most closely related to members of the genera *Euparixia* BROWN (see WOODRUFF & CARTWRIGHT 1967, GORDON & MCCLEVE 2003) and *Lomanoxia* MARTÍNEZ (see STEBNICKA 1999a, SKELLEY & HOWDEN 2003). Members of both of these genera are known to live with leaf-cutter ants, *Atta* FABRICIUS (Myrmicinae). All three genera share similar mesocoxa development and inflexed elytra. *Euparixia* differs in being larger (length > 4.3 mm) lacking prominent elytral setation (or having scale-like setae) along the declivity, lacking crenulate margins of the clypeus and pronotum, having two distinct meso- and metatibial spurs, and having elongated tarsi and body shape. *Lomanoxia* differs in being larger (length > 4.3 mm), having prominent elytral setation, lacking crenulate margins of the clypeus and pronotum (usually with distinct fringe of setae), having two distinct meso- and metatibial spurs, and having oval, often flattened body shape.

Euparixoides cribratus HINTON

(Figs 4-5)

Euparixoides cribratus HINTON, 1936: 275-276, fig. 1. - WOODRUFF & CARTWRIGHT 1967: 21, figs 8, 12; STEBNICKA 1998: 197.

M a t e r i a l e x a m i n e d. Holotype (sex undetermined) with label data "Panama, Rio Chinillo, 8.VI.1923, leg. J. ZETEK" (USNM).

Other specimens (12). **Costa Rica:** Heredia, Est. Biol. LaSelva, FIT, 10°26'N, 84°01'W, 24 Jun 1996, C. CARLTON, A. TISHECHKIN, LSAM0020611 (LSUC). **Honduras:** Atlantida, 15 km. W La Ceiba, 15-19-VI-1996, Coll. R. LEHMAN, flight intercept trap, tropical rainforest, TAMU-ENTO X00161109 (TAMU). **Nicaragua:** Rio San Juan Dept., 8 km SE El Castillo, Refugio Bartola, 30 m, rainforest, N10°58.6', W84°20.4', 6 FITs, 25-31.V.2002, S. PECK, 02-09 (HAHC). **Panama:** Colón Prov., Old Plantation Rd, 6.9 km S Gamboa 80 m, 4-7.VI.1995, J. ASHE & R. BROOKS (ISEA); San Lorenzo Forest. 9°17'N, 79°58'W, flight intercept trap, FIT-B2-16, 21-24 May 2004, A. TISHECHKIN, IBISCA-04 (ISEA); same data except FIT-R3-13, 20-21 May 2004 (USNM); same data except FIT-B1-18, 26-28 May 2004 (PESC); same data except FIT-B1-16, 21-24 May 2004 (PESC); same data except FIT-B3-16, 21-24 May 2004 (PESC); same data except FIT-R2-16, 21-24 May 2004 (PESC); same data except FIT-B2-16, 21-24 May 2004 (PESC); same data except FIT-I1-15, 15-17 May 2004 (PESC); Colón Prov., Parque Nac. Soberaria, Pipeline Rd., Km.6.1, 09°07'N, 79°45'W, 40m, 7-21-JUN-1995, J. ASHE, R. BROOKS #265, ex flight intercept trap (SEMC); same data except 23-25 MAY 1995, J. JOLLY, C. CHABOO, flt. intercept trap (PESC); same data except 20-22 MAY 1995, J. JOLLY, C. CHABOO, flt.intercept trap (SEMC); Panama Prov., Barro Colorado Island, 9°11'N, 79°51'W, 14-18 Jun 2000, S. CHATZIMANOLIS, ex FIT, PAN1C00 013, KUNHM-ENT SM0553271 (SEMC).

R e m a r k s. *Euparixoides cribratus* was described from a single specimen. Additional specimens from Panama, including the type, are quite uniform in body size and in having a shallow longitudinal groove at the base of the pronotum in which the punctures nearly coalesce (Fig. 4). Specimens from Honduras, Nicaragua and Costa Rica lack the longitudinal groove, the punctures do not touch, and are slightly larger in body size. No other observable difference was discovered that would lead us to believe they are a different species. The series from Panama show variation in the size and basic shape in the lobes of the pronotal lateral margins. In some, these lobes are more acute, in others more rounded. More specimens are needed before adequate analysis can be made on these variations, as they may indicate the presence of cryptic species.

Euparixoides johnsoni STEBNICKA

Euparixoides johnsoni STEBNICKA, 1998: 195-197, figs 1-3.

M a t e r i a l e x a m i n e d. Holotype female with label data "Brazil, Amazonas, Manaus, XII.1975, leg. W. HAMILTON/ *Euparixoides* sp. n.? det. C. JOHNSON/ *Euparia* sp. prob. new det. R. GORDON 81" (MMU). Three additional specimens, two males, labeled "Peru: Tambopata Prov., Madre de Dios Dpto., 15 km NE Puerto Maldonado, Reserva Cuzco Amazónica, 12°33'S, 69°03'W, 200 m, Plot #Z2U3, 26 June 1989 m, J. S. ASHE, R. A. LESCHEN, L. SANARA, #319 at large"; "Brazil, Belem. Para, Utinga, III-27-28. 1970, JM & BA CAMPBELL" (CNIC, SEMC, PESC).

R e m a r k s. *Euparixoides johnsoni* is most closely related to *E. cribratus*, it differs by having the posterior pronotal angles more acutely produced than those in *E. cribratus*, the pronotal punctures finer and the elytra with wide, transversely punctate striae, two apical meso- and metatibial spurs, and the body being strongly alutaceous. Close examination of the Peru specimens and a re-examination of the type showed the original description to be incorrect in a couple characters. First, *E. johnsoni* is not brachypterous and has fully developed flight wings. Second, the meso- and metatibia have two apical spurs, not one. However, the smaller lower spur is one third the length of the upper spur and is closely set at its base making it difficult to see. Third, the head of *E. johnsoni* bears erect setae. This is quite notable on the specimens from Peru, while they are indistinct and in places possibly rubbed off of the type.

Euparixoides papilio sp. n.

(Figs 6-7)

Holotype female with label data "Costa Rica, Prov. Puntarenas, Rincon de Osa, 50 m, 22-26.VI.2001, rainforest FIT's, S.& J. PECK" (CMNC). Paratypes (4): 1 – same data as holotype; 2

– same locality, Agua Buena 90-110 m, Est Boscosa – 08°42'03N, 83°30'48W – 21-29 June 2001, rotten log, W. PORAS; 1 – same locality and date, Berlese, rotten wood leaf litter, C. CHANDLER (INBI, ISEA, MAIC, PESCA).

Description. Length 3.9 mm. Body (Fig. 7) elongate, convex, moderately shiny, color piceous to black with margins of clypeus, sides of pronotum and legs reddish brown. Head moderate in size, feebly convex medially, eyes invisible when viewed from directly above; clypeus widely, shallowly emarginate, edge narrowly reflexed, rounded on each side of median emargination and very finely serrate toward small, obtuse genae; surface alutaceous over median convexity and outward to genae, minute punctures at middle blending into vertical band of fine punctures separated by about one diameter. Pronotum (Fig. 6) quadrate, papilionaceous in shape, disc strongly elevated, anterior angles rounded, sides widely flattened, swollen and upturned, lateral edge minutely crenulate, excavate at middle and rounded toward obtuse, protruding backward posterior angles; base bisinuate, slightly lobed and distinctly margined medially; pronotal surface on sides alutaceous, finely and very shallowly punctate, disc shiny with fine to moderate punctures separated by one diameter. Scutellum narrowly triangular, shiny. Elytra widest in apical third, microreticulate; shoulders steep laterally and serrate basally, humeri rounded, not dentate; sides inflexed, embracing body, epipleura well defined; intervals about 1.5 times wider than striae, punctures coarse, close, weakly crenate margins of intervals; intervals slightly convex, impunctate, with row of short, pale setae in apical fourth of elytra. Flight wings fully developed. Ventral sclerites glabrous; mesosternum lower than metasternum with cordate shaped, depressed, alutaceous area finely punctate throughout; mesocoxae widely separated, space between mesocoxae two times wider than width of mesofemur, coxal cavities slightly oblique, meso-metasternal carina lacking; metasternum convex, midline indicated, lateral metasternal triangle inconspicuous, punctures coarser than those of mesosternum, extending from side to side; abdominal sternites finely fluted along sutures, surface with punctures same size as those of mesosternum; disc of pygidium microreticulate, punctate with row of erect setae. All femora shiny and finely deeply punctured; meso- and metafemora long, narrow, slightly enlarged apically without postfemoral lines; protibia slender, tridentate, two apical teeth approximate; meso- and metatibiae long, relatively thick and parallel-sided with single, arcuate apical spur; tarsi about two times shorter than tibiae, tarsomeres thick; basal tarsomere of metatarsus subequal in length to tibial spur and to following three tarsomeres combined.

Remark s. *Euparixoides papilio* seems to be most closely related to *E. johnsoni*, but may be easily distinguished from that species and from other species in the genus by its unusually shaped pronotum (Figs 6-7).

Ety m o l o g y. The name derives from papilionaceous, meaning butterfly-shaped or winged, in reference to the shape of the pronotum.

***Euparixoides tachirensis* sp. n.**

(Fig. 3)

Holotype female with label data “Venezuela, Tachira, Pregonero Camp. Siberia La Idea, 1200 m, 10-31.VII.1989, rainforest FIT's, S. & J. PECK” (CMNC). Paratype female: Venezuela, Pregonero, Las Trampitas 1240 m, 9.VII.1989, ex submontane forest litter, S. & J. PECK (ISEA).

Description. Length 3.9-4.0 mm. Body elongate, convex, subopaque, setigerous, color piceous with margins of clypeus, sides of pronotum and legs reddish brown. Head moderate in size, convex medially, eyes invisible when viewed from directly above; clypeus widely, shallowly emarginate, edge narrowly reflexed, rounded on each side of median emargination and very finely serrate toward small, obtuse genae; surface alutaceous over median convexity and outward to genae, with vertical band of coarse, nearly contiguous punctures and row of upright, thin setae. Pronotum subquadrate, disc convex, lateral and basal margin distinctly crenulate; anterior angles obtuse, sides arcuate and reflexed in anterior third, then slightly emarginate in front of acutely produced posterior angles, base bisinuate, slightly lobed at middle; pronotal surface with lateral tumosity and everywhere distributed, coarse punctures separated by less than their diameter and bearing thin erect setae (Fig. 3). Scutellum narrowly triangular, alutaceous. Elytra parallel-sided, humeri

rounded, not dentate; sides slightly inflexed, embracing body, epipleura well defined; striae about two times narrower than intervals, punctures moderate in size, close; intervals flat, alutaceous, each with row of thin erect setae. Flight wings fully developed. Ventral sclerites glabrous; mesosternum lower than metasternum with cordate shaped, depressed, alutaceous area, coarse close punctures in anterior half and row of smaller punctures along margins in posterior half; mesocoxae widely separated, space between mesocoxae two times wider than width of mesofemur, coxal cavities slightly oblique, meso-metasternal carina lacking; metasternum convex, midline concave, lateral metasternal triangle indicated, punctures same size as those of mesosternum, extending from side to side; abdominal sternites finely fluted along sutures, each with row of minute punctures medially; disc of pygidium weakly eroded, setaceous, setae shorter than those on elytra. All femora microreticulate, finely punctured; meso- and metafemora long, narrow, parallel-sided, without postfemoral lines; protibia slender, tridentate, two apical teeth approximate; meso- and metatibiae slender, slightly sinuate with two small apical spurs; tarsi shorter than tibiae, tarsomeres relatively thick; basal tarsomere of metatarsus longer than upper tibial spur and subequal to following two tarsomeres together.

Male unknown.

R e m a r k s. *Euparixoides tachirensis* appears to be an atypical member of the genus, possessing two apical tibial spurs. It is most closely related to *E. cribratus* but differs from that species by the following features: body above with erect setae; pronotal sides arcuate and weakly excavate; elytra with striae punctures moderate in size and half the width of the intervals.

***Euparixoides araguaensis* sp. n.**

(Figs 1-2)

Holotype male with label data "Venezuela, Aragua, Rancho Grande, La Cumbre 1500 m, 9.VII.1987, cloud forest, log/bark, leaf litter, S. & J. PECK, 87-117" (CMNC).

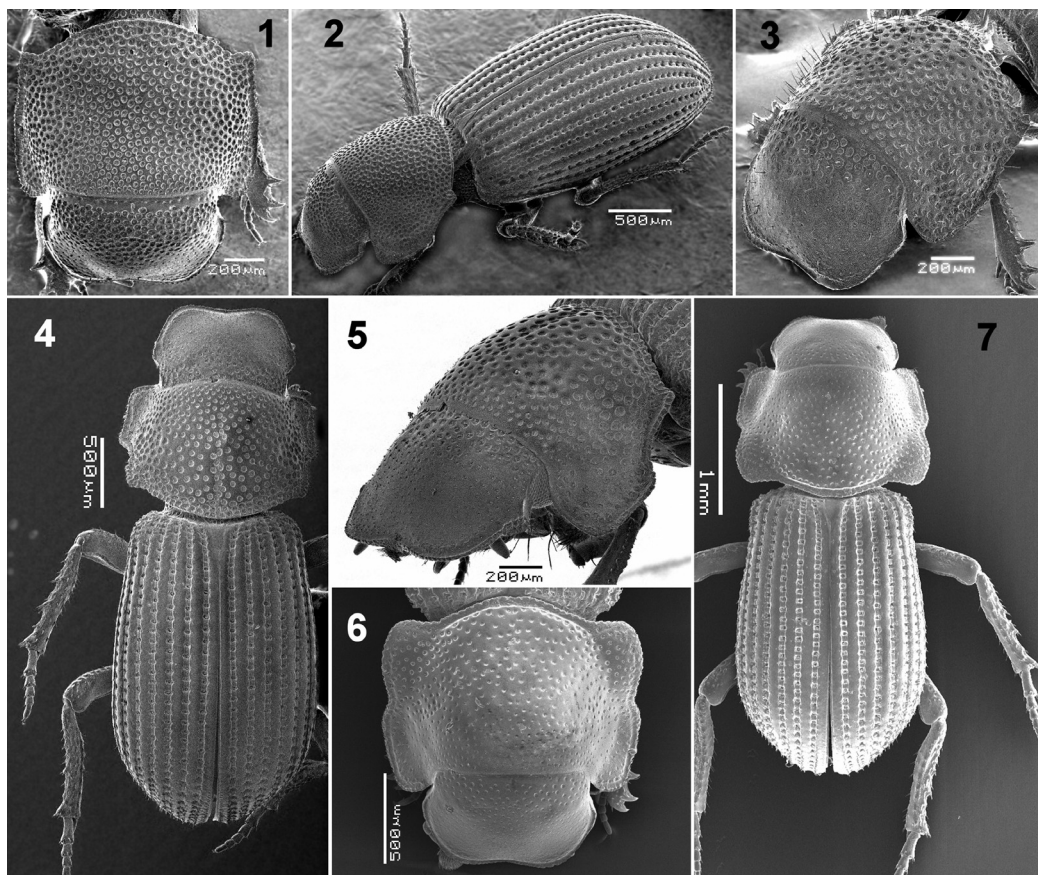
D e s c r i p t i o n. Length 3.8 mm. Body (Fig. 2) elongate, convex, shiny, color very dark brown, legs reddish brown. Head moderate in size, feebly convex medially, eyes invisible when viewed from directly above; clypeus widely, shallowly emarginate, edge narrowly reflexed, rounded on each side of median emargination and very finely serrate toward small, obtuse genae; surface alutaceous over median convexity and outward to genae, frontal area and vertex with fine to moderate, very dense, rugose punctures. Pronotum (Fig. 1) subquadrate, converging in anterior two-thirds, then very slightly emarginate in front of small, acutely prominent posterior angles, base sinuate, slightly lobed at middle without marginal line; pronotal surface with weak lateral tumosity and shallow depression, disc convex, with evenly distributed, moderate punctures separated by less than one diameter, punctures along alutaceous lateral margin and at anterior angles finer, less close. Scutellum narrowly triangular, shiny. Elytra widest in apical third, humeri rounded, not dentate, apical declivity minutely pubescent; sides inflexed, embracing body, epipleura well defined in anterior half; striae with punctures coarse, weakly crenating margins of intervals; intervals about 1.5 times wider than striae, shiny, slightly convex, impunctate. Flight wings functional. Ventral sclerites glabrous; mesosternum lower than metasternum, depressed, cordate shaped, alutaceous area finely and irregularly punctate throughout; mesocoxae widely separated, space between mesocoxae two times wider than width of mesofemur, coxal cavities slightly oblique; meso-metasternal carina lacking; metasternum convex, midline indicated, lateral metasternal triangle inconspicuous, punctate throughout surface, punctures coarser than those of mesosternum; abdominal sternites finely fluted along sutures, surface with punctures same size as those of mesosternum; disc of pygidium microreticulate, punctate and setaceous. All femora shiny and finely deeply punctured; meso- and metafemora long, narrow, slightly enlarged apically without postfemoral lines; protibia slender, tridentate, two apical teeth approximate; meso- and metatibiae long, relatively thick and parallel-sided with two apical spurs, lower spur fine, seta-like; tarsi short, about half tibial length, tarsomeres thick; basal tarsomere of metatarsus subequal in length to upper tibial spur and to following three tarsomeres combined.

Female unknown.

R e m a r k s. *Euparixoides araguaensis* is most closely related to *E. tachirensis*, both possessing two apical tibial spurs, but it may be distinguished by the following characters: body shiny, almost glabrous; pronotal sides weakly emarginate in front of small angulation of posterior angles; surface of abdominal sternites distinctly punctate throughout; basal tarsomere of metatarsus equal in length to three next tarsomeres.

Key to the species of *Euparixoides*

- 1 Lateral margin of pronotum nearly entire when viewed from above (Figs 1- 3), lacking strong medial constriction; meso- and metatibiae each with two apical spurs (second spur small) 2
- Lateral margin of pronotum with strong medial constriction when viewed from above (Figs 4-7); meso- and metatibiae each with one apical spur 3
- 2(1) Head, pronotum and elytra with long erect setae (Fig. 3). Venezuela *E. tachirensis* sp. n.
- Head, pronotum and elytra nearly glabrous (Figs 1-2), elytral declivity with minute setae. Venezuela *E. araguaensis* sp. n.
- 3(1) Meso- and metatibia with two apical spurs, lower spur one third length of upper spur and closely set at its base; body alutaceous. Brazil, Peru *E. johnsoni* STEBNICKA
- Meso- and metatibia with one apical spur; body shining. Central America 4
- 4(3) Pronotum with hind angles broadly explanate (Figs 6-7), lobe of hind angle nearly equal in size to lobe of anterior angle; pronotal punctures weakly impressed, posteriorly twice as large as on anterior disc. Costa Rica *E. papilio* sp.n.



Figs 1-7. *Euparixoides* spp.: 1 – *E. araguaensis*, sp.n., head and pronotum; 2 – *E. araguaensis*, sp.n., lateral habitus; 3 – *E. tachirensis*, sp.n., head and pronotum; 4 – *E. cribratus* HINTON dorsal habitus; 5 – *E. cribratus* head and pronotum; 6 – *E. papilio*, sp.n., head and pronotum; 7 – *E. papilio*, sp.n., dorsal habitus.

- Pronotum with hind angles not broadly explanate (Figs 4-5), lobe of hind angle distinctly smaller than anterior lobe; pronotal punctures strongly impressed, posteriorly 1.5 times larger than on anterior disc. *E. cribratus* HINTON

Genus *Lomanoxoides* STEBNICKA, 1999b

Type species *Euparia bitubericolis* SCHMIDT, 1909b: 44, by subsequent designation.

D i a g n o s t i c c h a r a c t e r s. *Lomanoxoides* can be distinguished from other euparine genera by their stout, strongly convex bodies; pronotum with lateral tumosity or tubercles at base, and lateral edge with fringe of stout setae (exception *L. herediae*); elytra intervals with distinct setation, at least laterally and at apex.

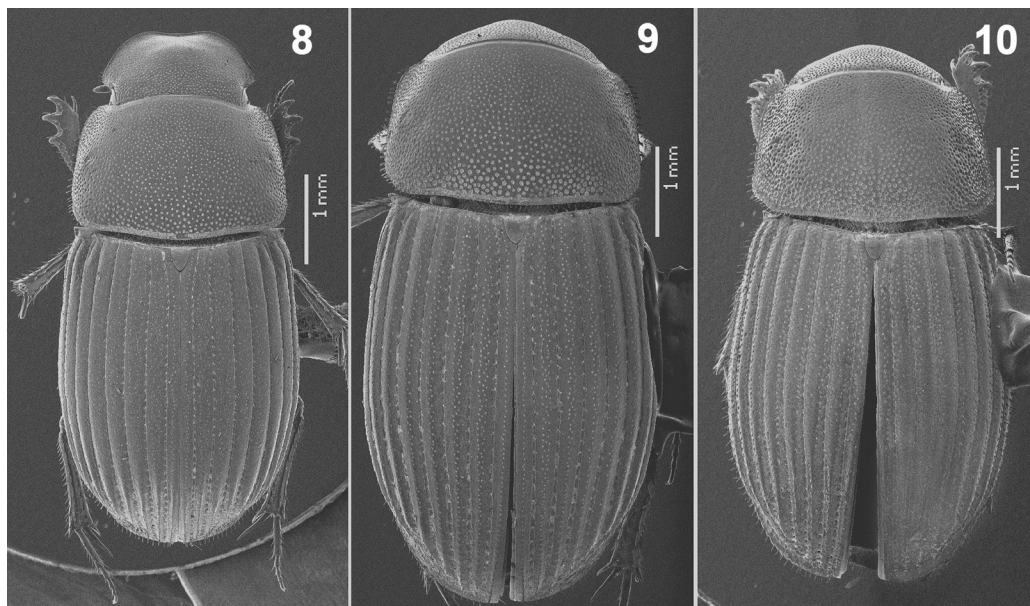
R e m a r k s. The genus presently contains seven species ranging from Honduras to Argentina. *Lomanoxoides tesari* (BALTHASAR) (Fig. 9) has been collected in nests of the leaf-cutter ant *Atta sexdens* (LINNAEUS). Numerous specimens of *Lomanoxoides nigrolineatus* (HINTON) (Fig. 8) have been collected in debris piles of *Atta* sp. and in refuse of *Atta columbica* GUÉRIN-MENÉVILLE in Panama. Two other species, *L. selviraensis* STEBNICKA (Fig. 13) and *L. bitubericolis* (SCHMIDT) (Fig. 14) are suspected to live with leaf-cutter ants and it is not known if they show host specificity with species of *Atta*.

Lomanoxoides mapitunari sp. n.

(Fig. 10)

Holotype male with label data "Peru, Dpt. Cuzco, La Convención, 680 m, Rio Mapitunari, 14.IX.1976, in *Atta* nest, leg. R. GORDON" (USNM). Paratypes (37), same data as holotype (ISEA, PESCA, USNM).

D e s c r i p t i o n. Length 5.0-5.5 mm. Body (Fig. 10) elongate oval, convex, microreticulate and moderately shiny; color piceous, in some specimens elytra brownish. Head as wide as pronotal edge, weakly gibbose medially; clypeal margin widely rounded on each side of shallow median emargination, sides arcuate, genae rounded with clump of 4-5 short, pale setae; surface everywhere finely, uniformly punctate, punctures become gradually deeper from anterior margin to vertex, generally separated by one diameter. Pronotum transverse, wider posteriorly, anterior angles rounded, sides arcuate toward widely truncate posterior angles; sides and base without mar-



Figs 8-10. Dorsal habitus images: 8 – *Lomanoxoides nigrolineatus* (HINTON); 9 – *L. tesari* (BALTHASAR); 10 – *L. mapitunari*, sp.n.

ginal line, finely crenulate, crenulations bearing short, blunt setae; surface evenly convex except small, shallow fovea laterally; punctures on median anterior disc same size as those on vertex, posterior half of pronotum with short, smooth midline, gradually coarser punctures become largest along base, smaller and nearly rugose laterally and here bearing short, scarce, upright setae. Scutellum small, triangular, shiny. Elytra convex, widest at middle, humeral denticles fine, acute; striae finely impressed, narrow, stria punctures longitudinal, shallow; intervals slightly pruinose along striae and uncoated medially (in older specimens coating invisible), each with fine, irregularly distributed punctures and minute yellowish setae, intervals of apical third tectiform, eroded on each side of median carina, each with median row of longer, erect setae, 10th interval flat, opaque. Mesosternum finely piliferous, meso-metasternal carina short; metasternum convex, midline shallow, punctures fine, scattered, lateral metasternal triangle roughly sculptured; abdominal sternites 1-2 finely fluted along sutures, sternites 3-4 with longer and coarser fluting, surface setigerously punctate from side to side; disc of pygidium scabrously granulate and setigerous. Profemur with deep perimarginal groove and scabrous surface; punctures of meso- and metafemora fine but deep, minutely setigerous, postfemoral lines complete; terminal spur of protibia slender, meso- and metatibiae with longitudinal lines, setaceous, apex of metatibia without accessory spine except external spine; basal segment of metatarsus equal in length to upper tibial spur and to following tarsomeres combined. External sexual characters weakly indicated, in male penultimate abdominal sternite shorter than in female, disc of pygidium longer.

R e m a r k s. *Lomanoxoides mapitunari* is closely related to *L. nigrolineatus* (HINTON) and *L. tesari* (BALTHASAR). It differs from *L. nigrolineatus* by the lack of pronotal marginal groove, deeper elytral striae and more convex and setaceous discal intervals; from *L. tesari* by the pronotum without marginal line and the elytral intervals more rounded medially with lateral coating and with punctures concentrated along striae. *Lomanoxoides tesari* and *L. nigrolineatus* are known to occur in detritus piles of leaf-cutter ants, *Atta* spp.

***Lomanoxoides herediae* sp. n.**

(Fig. 12)

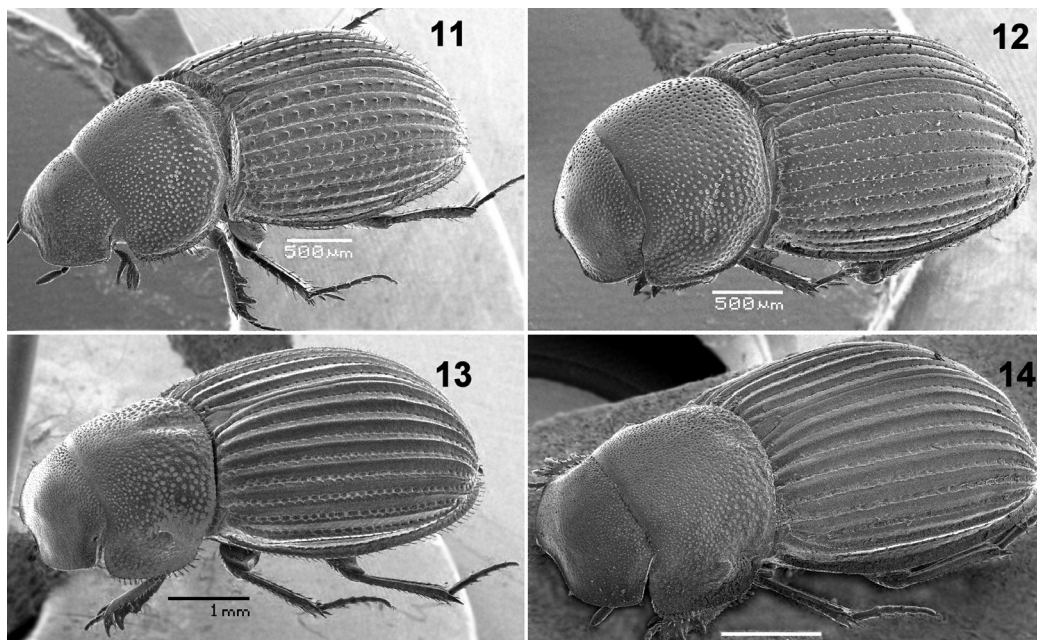
Holotype male with label data "Honduras, Cortes P. N. Cerro Azul, Meambar, 20.V.1995, mv+bl, leg. R. TURNBOW" (FSCA). Paratype female: Costa Rica, Heredia, 1 km S of Puerto Viejo, 4-5.VI.1984, E. RILEY (PESC).

D e s c r i p t i o n. Length 4.0-4.1 mm. Body (Fig. 12) oblong oval, convex, shiny, carbon black, legs piceous. Head narrower than pronotal edge, weakly gibbose medially; clypeal margin subdentate on each side of narrow, deep median emargination, sides widely arcuate toward small, obtuse genae; surface very finely granulose along anterior margin, very fine punctures above blending into vertical band of larger and deeper punctures separated by one their diameter. Pronotum transverse, convex, sides and base margined, anterior angles obtuse, reflexed, posterior angles truncate and very slightly emarginate, lateral edge finely crenulate with minute setae; pronotal surface with long, oblique depression on each side of disc and with lateral tumosity, punctures along anterior margin same size as those of vertex, toward base become gradually coarser, everywhere separated by about one their diameter. Scutellum narrow, small. Elytra convex, widest at middle, finely setigerous laterally and apically, with distinct basal bead and acutely prominent humeral denticles; discal striae very finely impressed with inconspicuous punctures, lateral and apical striae wider and deeper; intervals flat on disc, convex laterally, subcarinate and swollen apically, each interval with fine scattered punctures. Ventral surface shiny, everywhere punctured, punctures same size and spacing as those of pronotum; metasternum convex, midline weakly indicated, lateral metasternal triangle deep; abdominal sternites 1-3 finely fluted in anterior one-third, fluting of fourth sternite longer and coarser; disc of pygidium deeply eroded with median longitudinal carina. All femora shiny, punctate, punctures bear minute setae; meso- and metatibiae as long as femora, setaceous; apex of metatibiae with fringe of short setae, accessory spine lacking; tarsi shorter than tibiae, basal tarsomere of metatarsus equal in length to upper tibial spur and to following tarsomeres together. In male, penultimate abdominal sternite shorter than in female, disc of pygidium longer.

R e m a r k s. *Lomanoxoides herediae* is closely related to *Lomanoxoides setosus* (BALTHASAR) (Fig. 11) [= *Odontolytes setosus* BALTHASAR; = *Ataenius thoracalis* PETROVITZ; see STEBNICKA 2005b, in press]. It differs from *L. setosus* by the following characters: body darker in color; pronotum lacking basal fold; elytral intervals smooth without row of tooth-like tubercles and erect setae.

Key to the species of *Lomanoxoides*

- 1 Length 3.8-4.0 mm 2
- Length 4.8-5.5 mm 3
- 2(1) Body castaneous; disc of pronotum near base with transverse fold broken by short, shallow fossa; elytral intervals with median row of tooth-like tubercles bearing erect setae (Fig. 11). South America *L. setosus* (BALTHASAR)
- Body carbon black; disc of pronotum near base without transverse fold; elytral intervals finely punctate, setaceous laterally and apically without row of tubercles (Fig. 12). Central America *L. herediae* sp. n.
- 3(1) Pronotum laterally with broad tumosity (Figs 13-14), sides deplanate and upturned, disc above scutellum more or less deeply impressed, surface punctures unequal in size, unevenly spaced; elytral intervals tectiform from base to apex 4
- Pronotum laterally with small tumosity (Figs 9-10), sides steep, not deplanate, disc lacking basal impression, surface punctures equal in size, evenly spaced; elytral intervals convex to subcarinate in apical third 5
- 4(3) Pronotum with basal fossa deep, elongate oval (Fig. 13); elytral intervals in posterior half and elytral margin from base to apex with thick, blunt setae. Brazil, Paraguay *L. selviraensis* STEBNICKA
- Pronotum with basal fossa shallow, circular (Fig. 14); elytral intervals glabrous, elytral margin apically with few fine setae. Argentina *L. bitubericollis* (SCHMIDT)
- 5(3) Elytra bicolored with intervals darkened medially, discal intervals flat (Fig. 8). Panama *L. nigrolineatus* (HINTON)
- Elytra unicolored, discal intervals convex (Figs 9-10). South America 6



Figs 11-14. Lateral habitus images: 11 – *Lomanoxoides setosus* (BALTHASAR); 12 – *L. herediae*, sp.n.; 13 – *L. selviraensis* STEBNICKA; 14 – *L. bitubericollis* (SCHMIDT).

- (5) Pronotal base with grooved marginal line; elytral intervals with median rows of fine, close punctures bearing fine setae (Fig. 9). Argentina, Brazil, Paraguay *L. tesari* (BALTHASAR)
- Pronotal base lacking grooved marginal line; elytral intervals with lateral irregular rows of minutely setigerous punctures (Fig. 10). Peru *L. mapitunari* sp. n.

Genus *Iguazua* STEBNICKA, 1997

Type species *Iguazua lilloana* STEBNICKA, 1997: 71-72, by monotypy.

D i a g n o s t i c c h a r a c t e r s. Body small, length 2.8-3.3 mm, castaneous-brown; body (at least head) dorsally with microsetation; head and pronotum coarsely, densely punctate; posterior pronotal angles crenulate; gena reduced, not prominent; pygidium large, apically smooth and bent anteriorly (length of pygidium sexually dimorphic in one species); elytral striae usually with shallow punctation.

R e m a r k s. *Iguazua* presently contains three species known from Argentina, Central America and the West Indies. It seems to form a transitional link between Gondwanan *Saprosites* REDTENBACHER and Indo-Australian *Cnematoplatys* SCHMIDT sharing with these genera some similar features such as the general characters of the legs and sculpture of the body. A cladistic analysis (STEBNICKA 2005a, in press) confirms these relationships.

Iguazua is easily confused with the small, New World members of *Saprosites* REDTENBACHER, like *Saprosites subterraneus* PETROVITZ (Fig. 19). They share a similar body size, shape, color, have reduced genae, and lack additional accessory spines on the meso- and metatibiae (present in larger members of *Saprosites* in the New World). *Iguazua* is distinguished by the characters mentioned above.

Iguazua blackwelderi (CHAPIN), comb. n.

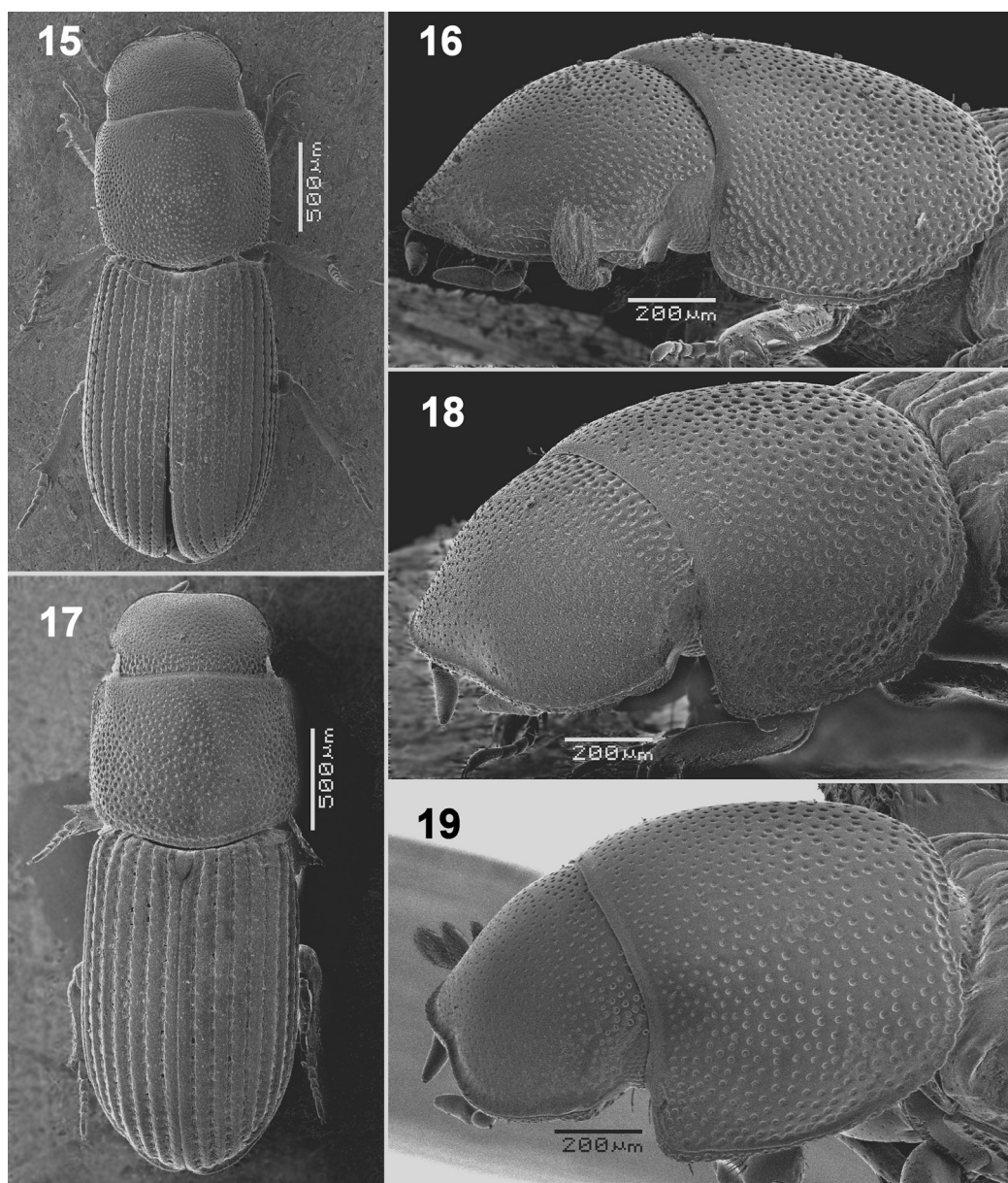
(Figs 15-16, 20-21)

Saprosites blackwelderi CHAPIN, 1940: 11-12. - DELLACASA 1988: 287 (catalogued).

M a t e r i a l e x a m i n e d. Holotype "Puerto Rico, Mayaguez, Jan. 6.1937 / under bark / Sta. 357 BLACKWELDER / [red label] Type no. 53319 USNM / *Saprosites blackwelderi* CHAPIN, det. CHPN. 1940" (USNM). Paratypes (3): same data a holotype except " ... Sta. 358..." (USNM) and "Anasco P.R. 25.X.1935, in decayed wood, R.G. OAKLEY" (USNM).

Other specimens (26). **Cuba:** Camaguey Prov., Monte Imias, nr. California, June 7, 1959, M. W. SANDERSON, C59-20 (USNM). **Puerto Rico:** near Los Marias, Rt.19 km 29.5, 11.VIII.1961, under bark, leg. FLINT & SPANGLER (ISEA, PESC, USNM). **Antilles: Guadeloupe,** Deshaies Gr. Ange, 7.VIII.1974, in log, leg. S. VIT; **Santa Lucia,** Mt Layau 50 m, valley of Esperance River, 15.VI.1979, leg. JACCOUD (ISEA, MHNG, PESC). **Montserrat:** Centre Hills, 16°45.209'N, 62°12.722'W, Hope Ghaut, E of Salem, 750', water intakes, 18.VI.2000, M. A. IVIE & K. S. GUERREIRO, in rotten log (MAIC, PESC). **Guyana:** Region 8, Iwokrama Forest, Turtle Mt. base camp, 50 m, 4°43'5"N, 58°43'5"W, 30 MAY 2001; R. BROOKS, Z. FALIN, GUY1BF01 069, ex under bark, KUNHM-ENT SM0567565 (SEMC).

D i a g n o s t i c c h a r a c t e r s. Length 2.8-3.1 mm. Body (Figs 15, 20) parallel-sided, glabrous, moderately shiny, light castaneous. Head small, weakly gibbose medially; clypeus (Fig. 16) with margin rounded on each side of shallow median emargination and very minutely crenulate; gena small, rounded, with broad smooth groove in front of eye (Fig. 16); surface along anterior margin finely transversely rugulose, median area and vertex with very fine, evenly spaced punctures separated by about one their diameter. Pronotum quadrate, convex, sides steep, thinly margined, posterior angles widely rounded, edge finely crenulate, base without marginal line; pronotal punctures close, in anterior half nearly same size as those on vertex, in posterior half of disc coarser punctures intermixed and slightly irregularly spaced. Elytra narrower than pronotum with small epipleural denticles; striae very narrow, shallowly punctate, intervals flat, distinctly punctured from base to apex. Ventral surface shiny, everywhere punctate, punctures separated by about



Figs 15-19. Dorsal habitus and lateral head with pronotum: 15-16 – *Iguazua blackwelderi* (CHAPIN); 17-18 – *I. costaricensis*, sp.n.; 19 – *Saprosites subterraneus* PETROVITZ.

one their diameter, finest on abdominal sternites; sternites minutely fluted along sutures, disc of pygidium relatively broad, shiny. Legs moderate in length; profemur shiny punctate; meso- and metafemora narrow; lateral teeth of protibia small, acute, two first teeth approximate; meso- and metatibiae slender, slightly flattened dorsoventrally, apical spurs thin; tarsal joints short, relatively thick, basitarsomere of metatarsus shorter than upper tibial spur and subequal in length to following two tarsomeres combined. In male, penultimate abdominal sternite shorter than in female, disc of pygidium longer; genitalia as in Fig. 21.

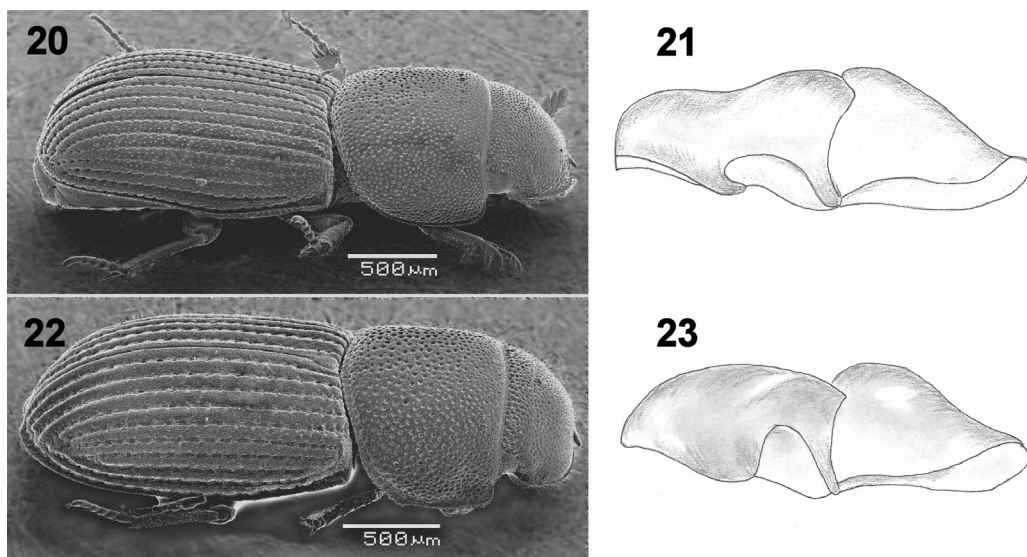
R e m a r k s. This species bears the generic characters of *Iguazua* being most closely related to *I. lilloana* STEBNICKA. It differs from that species by having more slender, glabrous body, longer tibiae and the less arcuate abdominal sternites with pygidium smaller and not incurved ventrally. It is unique in bearing a modified gena with a broad smooth groove in front of the eye (Fig. 16).

***Iguazua costaricensis* sp. n.**

(Figs 17-18, 22-23)

Holotype male with label data "Costa Rica, Turrialba, 20 May 1951, under bark, leg. O.L. CARTWRIGHT" (USNM). **Paratype** female, same data as holotype (USNM).

D e s c r i p t i o n. Length 2.8-3.0 mm, greatest width 0.9-1.0 mm. Body (Figs 17, 22) elongate oval, convex, opaque, glabrous, color dark brown. Head small, about 1/3 wider than long, weakly gibbose medially; clypeus (Fig. 18) anteriorly truncate or very shallowly emarginate, sides rounded to small obtuse gena; gena with small indistinct, smooth groove in front of eye (Fig. 18); surface punctures minute, evenly distributed, separated by one their diameter, on vertex slightly elongate, larger and closer. Pronotum subquadrate, lateral and basal marginal line distinctly grooved; anterior angles obtuse, reflexed, sides short and straight to obtusely produced posterior angles, base slightly sinuate; surface deplanate at anterior angles, punctures close, fine punctures in anterior fourth of disc become gradually larger toward base and sides, on disc separated by one diameter or more, laterally closer and nearly contiguous in anterior angles; lateral margin finely crenulate. Scutellum small, impunctate. Elytra about two times as long as pronotum, parallel-sided with double denticles, first humeral denticle fine, placed at 7th interval, second epipleural denticle larger but invisible from above; elytral striae deep, contiguous punctures crenate inner margins of intervals; intervals almost as wide as striae, convex, minutely punctured. Prosternal process wide, triangular; mesosternum lower than metasternum, surface slightly shiny; mesocoxae approximate, intervening carina fine, bifid; metasternal midline indicated, disc evenly, rather coarsely punctate; abdominal sternites finely fluted along sutures, punctures markedly finer than those on metasternum, extending from side to side, separated by one diameter, pygidium convex, disc punctate, not eroded. Profemur wide, perimarginal groove deep, surface shiny, punctate; meso- and metafemora narrow, finely punctate, postfemoral lines complete; lateral teeth of protibia small, two apical ones approximate; tibiae as long as femora, flattened dorsoventrally and slightly sinuate, apex without



Figs 20-23. Lateral habitus and male aedeagus: 20-21 – *Iguazua blackwelderi* (CHAPIN); 22-23 – *I. costaricensis*, sp.n.

accessory spine, spurs thin, slightly arcuate; metatarsus shorter than tibia, tarsomeres subquadrate, basitarsomere shorter than following two tarsomeres together. In male, penultimate abdominal sternite shorter than in female, genitalia as in Fig. 23.

R e m a r k s. *Iguazua costaricensis* has the characters intermediate between *Iguazua* and some species of *Saprosites* REDTENBACHER. It differs from the remained two species of the genus by the following characters: clypeus anteriorly smooth, without rugulae; pronotum with lateral and basal marginal line; pronotal posterior angles well defined, obtuse; elytra with deep striae and coarse stria punctures.

Key to the species of *Iguazua*

- 1 Clypeal surface along anterior margin finely rugulose (Fig. 16); pronotal posterior angles widely rounded, edge minutely serrate, base without marginal line; elytral striae and punctures fine, shallow 2
- Clypeal surface along anterior margin smooth, without rugulae (Fig. 18); pronotal posterior angles well defined, obtuse, edge smoothly margined, base with marginal line; elytral striae and punctures coarse, deep. Costa Rica *I. costaricensis* sp. n.
- 2(1) Body stout, covered with minute setae; pygidium broad, strongly bent ventrally toward penultimate sternite; meso- and metatibiae shorter than femora, sinuate. Argentina *I. lilloana* STEBNICKA
- Body slender, glabrous (Fig. 15), minute setae only on clypeus; pygidium moderate in size, slightly bent ventrally toward penultimate sternite; meso- and metatibiae as long as femora, slender. West Indies *I. blackwelderi* (CHAPIN)

Genus *Auperia* CHEVROLAT, 1864

Type species. *Auperia denominata* CHEVROLAT, 1864: 413, by indication (see STEBNICKA 2002).

D i a g n o s t i c c h a r a c t e r s. Body robust, elongate to strongly convex, dark castaneous to black; head broad, usually as wide as pronotum, and moderately to strongly gibbose at middle; pronotum shortened and broad, laterally explanate or not, lacking marginal setae, usually lacking basal marginal line; elytral intervals lacking tubercles; prosternal process broad; mesosternum with long intercoxal carina or callosity; meso- and metatarsi with first tarsomere longer than long tibial spur, often broadly flattened and densely setose ventrally.

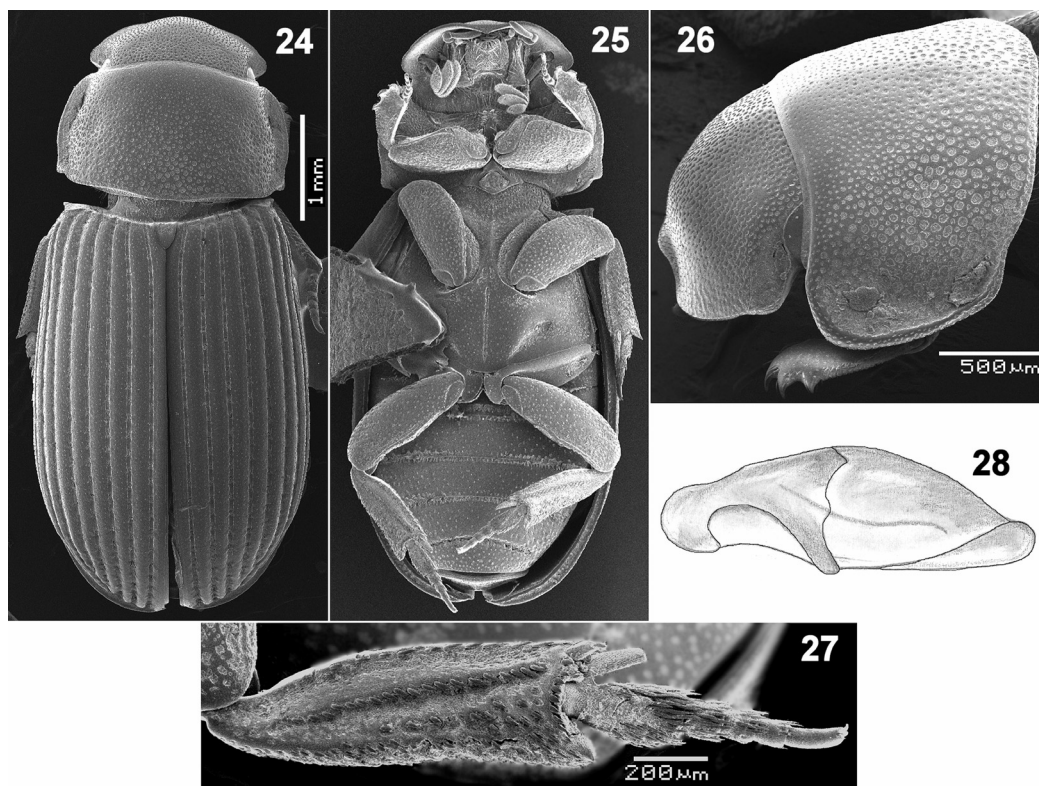
R e m a r k s. *Auperia* was recently revised by STEBNICKA (2002). Members of this genus seem to be forest dwellers, having been found in rich organic litter both on the ground and in arboreal situations. *Auperia denominata* (CHEVROLAT) is known to occupy arboreal squirrel leaf nests (SMITH 2005). Some new taxa have been studied which are presently attributed to this genus. The following, highly unique, species are described, and many known specimens were collected fogging the forest canopy.

Auperia waoraniae sp. n.

(Figs 24–28)

Holotype male with label data “Ecuador, Napo Res. Ethnica Waorani, 1 km S of Onkone Gare Camp, Trans. Ent., 220 m, 00°39’10”S 076°26’W, 5 Feb. 1996, T. L. ERWIN, et.al, insecticidal fogging of mostly bare green leaves, some with covering of lichenous or bryophytic plants in terre firme forest, At Trans. 4, Sta. 9 Project MAXUS Lot 1439” (PNUQ). Paratypes (16, unless noted are deposited in USNM and PUNQ): same data as holotype (PESC, ISEA); same data except ... 3 Jul. 1995 ... Lot 1099; same data except ... 21 Jun. 1996 ... Lot 1559; same data except ... 3 Jul. 1995, ... Sta. 7 Project MAXUS Lot 1097; same data except ... 8 Feb. 1995, ... At. Trans. 9, Sta. 2 Project MAXUS Lot 951; Ecuador: Prov. Orellana, Tipituni Biological Station, 00°37’55”S, 076°08’39”W, 220–250m., 5 Feb. 1000, T. L. ERWIN, et al. collectors, insecticidal fogging of mostly bare green leaves..., Lot 2094 Trans. T/1 Sta. 5.

Description. Length 5.8-6.0 mm. Body (Fig. 24) elongate, dark brown to piceous, feebly shiny. Head large, gibbose at middle, frontal suture convex at eyes; clypeal margin broadly rounded on each side of moderate median emargination, sides arcuate toward obtusely angled, prominent genae; clypeal surface alutaceous just above median emargination, with 3-4 fine transverse rugulae, median and lateral area with fine, elongate punctures separated by about one diameter or less, closer and slightly confluent at eyes, blending into vertical band of slightly coarser punctures separated by one diameter. Pronotum (Figs 24, 26) transverse, converging posteriorly, base sinuate without marginal line; anterior angles broadly rounded, sides expalante and straight toward obtuse posterior angles, lateral edge slightly reflexed, hairless; surface distinctly deplanate at anterior angles with shallow, diagonal depression on sides, punctures mixed fine and moderate to coarse, very fine to fine punctures of median anterior disc become gradually coarser toward base and sides and here separated by less than one diameter. Scutellum triangular, shiny. Elytra elongate, widest at apical third, humeral denticles small, acute; striae deep, stria punctures separate, slightly transversely crenate inner margins of intervals; intervals convex, minutely punctate throughout; elytral interval 10 flattened, opaque. Prosternal process widely triangular; mesosternum shagreened, flattened without callosity, meso-metasternal carina (Fig. 25) wide basally, shining; metasternum convex, midline impressed, discal punctures fine to moderate, scattered, lateral metasternal triangle deep, shagreened; abdominal sternites at middle with fine short fluting increasingly longer to sides, longest on sternite 5, surface shiny with fine scattered, minutely setigerous punctures being closer and coarser laterally; disc of pygidium deeply eroded. Profemoral surface opaque with dense, confluent punctures; meso- and metafemora punctate, posterior lines strong, complete; meso- and metatibiae unusually wide (Figs 25, 27), almost parallel-sided and flattened



Figs 24-28. *Auperia waoraniae*, sp.n.: 24 – dorsal habitus; 25 – ventral habitus; 26 – lateral head and pronotum; 27 – metatibia and tarsus; 28 – male aedeagus, lateral view.

dorsoventrally with longitudinal lines covered with short, yellow, squamiform setae; metatibia apically with external spine, short spurs and fringe of short setae; tarsi two times shorter than tibiae, joints thick, covered with squamiform setae; basal tarsomere of metatarsus longer than upper tibial spur and shorter than following tarsomeres combined. In male, penultimate abdominal sternite shorter than in female, disc of pygidium longer; genitalia as in Fig. 28.

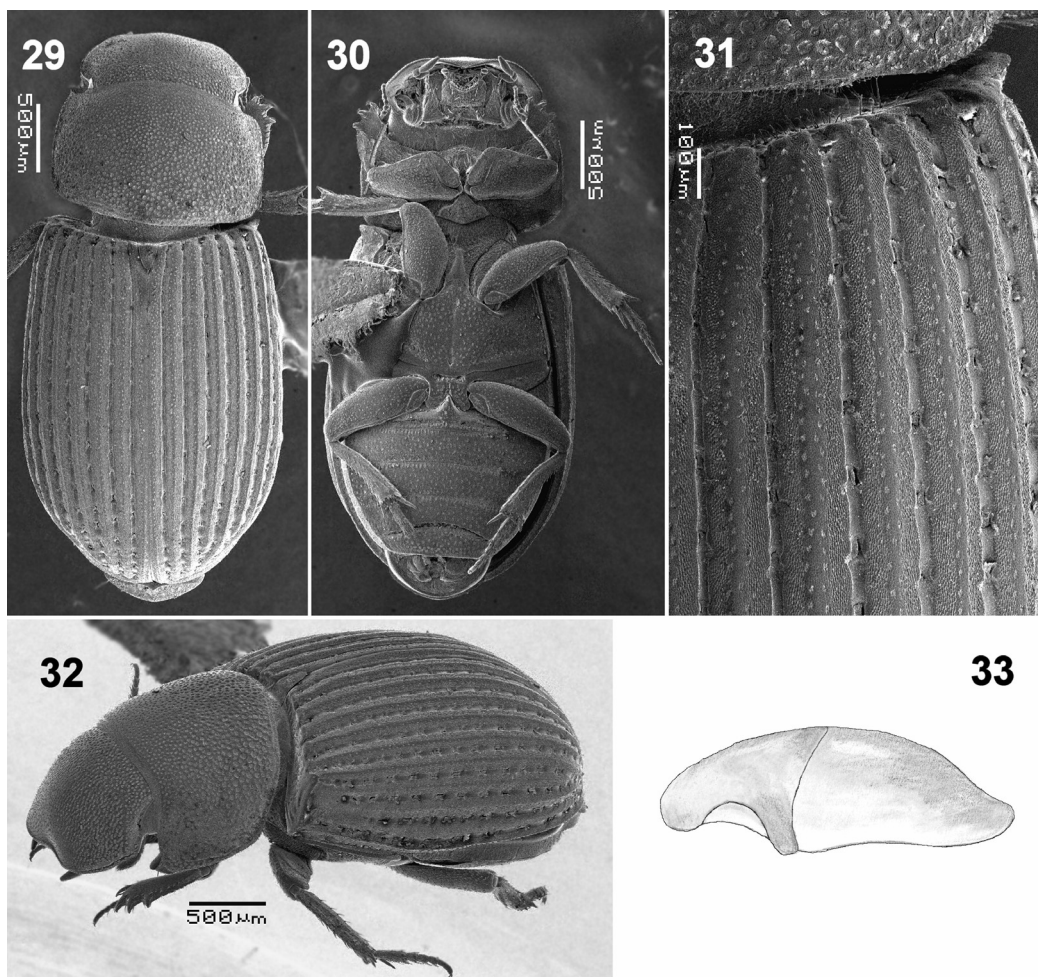
R e m a r k s. *Auperia waoraniae* belongs to the cluster of species including *A. domingo* STEBNICKA, *A. teutoniae* STEBNICKA, *A. transversaria* (SCHMIDT) and *A. puyoensis* STEBNICKA. In the key to species of *Auperia* (STEBNICKA 2002), it will fall to couplets 7-11. The species is most closely related to *A. domingo* described from Ecuador, sharing with that species a similar body sculpture and carinate metasternum lacking eroded callosity. However, it may be easily distinguished from *A. domingo* and from all other species in the genus by its unusually wide meso- and metatibiae with lines of squamiform setae.

***Auperia tectipennis* sp. n.**

(Figs 29-33)

Holotype male with label data "Ecuador, Napo, Res. Ethnica Waorani, 1 km S of Onkone Gare Camp, Trans. Ent., 20 June 1996, 220 m, 00°39'10"S, 076°26'W, T. L. ERWIN, et al. collectors / insecticidal fogging of mostly bare green leaves, some with covering of lichenous or bryophytic plants in terre firme forest, At Trans. 2, Sta. 10 Project MAXUS Lot 1450" (PNUQ). Paratypes (3 - PESC, PUNQ and USNM): same data as holotype except ... 4 Feb. 1996 ... Lot 1420; same data except ... 8-9 Feb. 1995 ... with no Lot numbers; Ecuador, Napo Tipituni Biodiversity Station, 216 m, 00°37'55"S, 076°08'39"W, 4 July 1998, T. E. ERWIN, et al. collectors, insecticidal fogging of mostly bare green leaves, some with covering of lichenous or bryophytic plants, Lot 1873 Transect #8 Sta. 4.

D e s c r i p t i o n. Length 4.0-4.3 mm. Body (Fig. 29) elongate, dark brown to piceous, alutaceous. Head large, gibbose at middle, frontal suture convex at eyes; clypeal margin broadly rounded on each side of moderate median emargination, sides arcuate toward obtusely angled, prominent genae; clypeal surface alutaceous just above median emargination, median and lateral area with fine, elongate punctures separated by about one diameter or less, closer and slightly confluent at eyes, blending into vertical band of slightly coarser punctures separated by one diameter. Pronotum (Figs 29, 32) transverse, sides parallel, base weakly lobed and with marginal heavily punctate at middle; anterior angles broadly rounded, produced, explanate and sides straight toward obtuse posterior angles, lateral edge slightly reflexed, hairless; surface distinctly deplanate at anterior angles and shallow, diagonal depression on sides, punctures mixed fine and moderate, fine punctures of median anterior disc become gradually coarser toward base and sides and here separated by less than one diameter. Scutellum triangular, shagreened. Elytra elongate, widest at apical third, humeral denticles small, acute; striae deep, stria punctures separated by 2-3 diameters; intervals laterally shagreened (Fig. 29, 31), with shiny tectiform midline bearing narrowed row of minute punctures; elytral interval 10 weakly flattened, opaque. Prosternal process widely triangular, rugosely punctate; mesosternum shagreened, rugosely punctate, flattened without callosity, meso-metasternal carina (Fig. 30) shining, wide basally with two diagonal impressions; metasternum convex, midline impressed, discal punctures fine to moderate, scattered, lateral metasternal triangle deep, shagreened; abdominal sternites at middle with fine short fluting increasingly longer to sides, longest on sternite 5, surface weakly shiny with fine scattered, minutely setigerous punctures being closer and coarser laterally; disc of pygidium deeply eroded. Profemoral surface opaque with dense, confluent punctures; meso- and metafemora punctate, posterior lines strong, complete; mesofemur shorter and wider than metafemur; meso and metatibiae as long as respective femora, narrow and outwardly curved; metatibia apically with external spine, short spurs and fringe of short setae; tarsi two thirds length of tibiae, joints narrow, covered with dense setae; basal tarsomere of metatarsus longer than upper tibial spur and equal in length to following 3 tarsomeres combined. In male, penultimate abdominal sternite shorter than in female, disc of pygidium longer; genitalia as in Fig. 33.



Figs 29-33. *Auperia tectipennis*, sp.n.: 29 – dorsal habitus; 30 – ventral habitus; 31 – elytral base; 32 – lateral habitus; 33 – male aedeagus, lateral view.

R e m a r k s. *Auperia tectipennis* belongs to the cluster of species including *A. domingo* STEBNICKA and *A. guayara* STEBNICKA. In the key to species of *Auperia* (STEBNICKA 2002), it will fall to couplets 7-11. The species is most closely related to *A. domingo* described from Ecuador, sharing with that species a similar body characters and carinate metasternum lacking eroded callosity. However, it may be easily distinguished from all other species in the genus by its unusually tectiform and shagreened elytral intervals with punctures being restricted to a narrow median row.

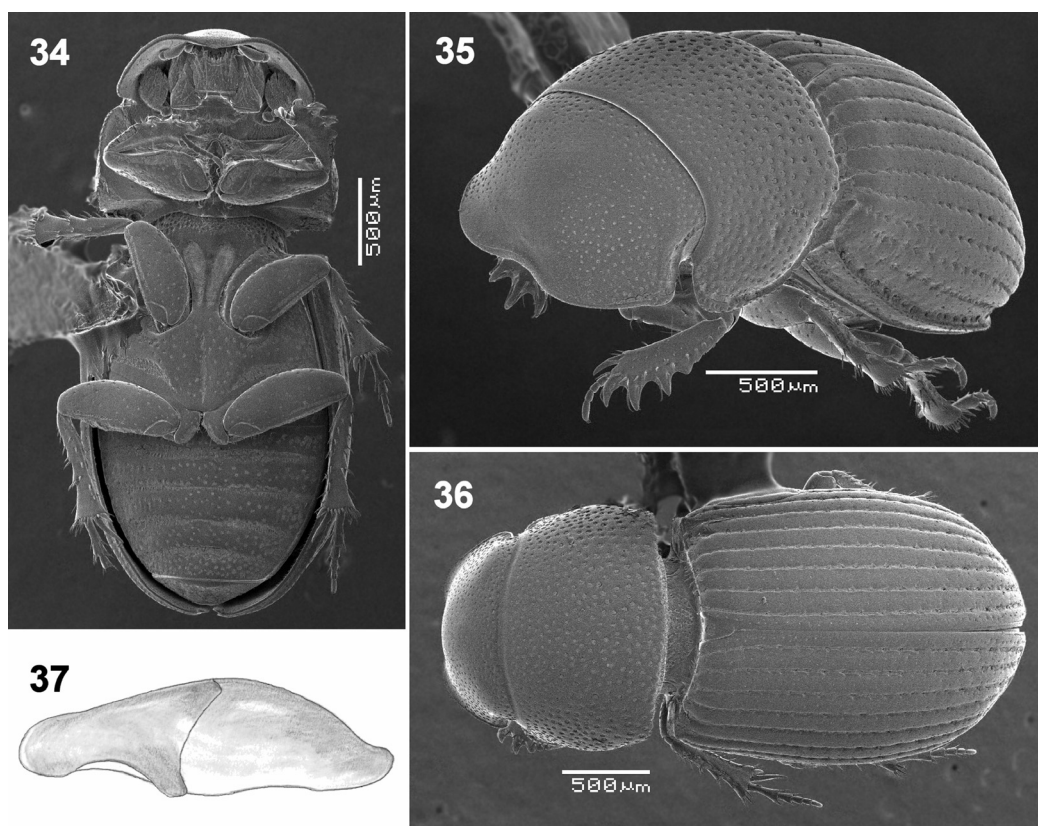
E t y m o l o g y. The species is named after its distinctive elytral intervals: tectiform meaning roof-like and *pennis* meaning feather or wing.

Auperia viejoae sp. n.

(Figs 34-37)

Holotype male with label data “[Costa Rica], C.R. Heredia, 1 Km. S. Pt.Viejo, VI-4-5-[19]84: E. RILEY, D. RIDER & D. LEDOUX” (INBI); Paratypes (2): 1 – same data as holotype; 1 – Prov. Heredia, La Selva, 100 m, 14-15.VIII.1991, M.A. IVIE (MAIC, PESCO).

Description. Length 3.5 mm. Body (Fig. 36) oblong oval, strongly convex, shiny dark brown. Head unusually large, strongly gibbose at middle; clypeus rounded on each side of more or less deep median emargination, side arcuate to obtuse, prominent genae; clypeal surface alutaceous just above median emargination; frontal suture marked by slight elevation near eye, minute puncture of clypeal surface become more notably coarser at base and sides of head (Fig. 35), moderate punctures at base evenly spaced, separated by 1-2 diameters. Pronotum (Figs 35-36) subquadrate, convex, base without marginal line; anterior angles obtusely rounded, produced, side short, straight toward widely truncate posterior angle, lateral margin thickened, punctate; pronotal punctures moderate at anterior margin become increasingly larger to base and to sides, everywhere separated by two diameters or less. Scutellum triangular, shiny. Elytra relatively short, arcuate, convex, humeral denticle relatively small; striae moderately deep, stria punctures separated by 2-3 diameters; intervals weakly convex on disc, elevated apically, interval 10 convex, shining, with few visible minute punctures. Prosternal process widely triangular. Mesosternum with very low, broad shagreened, two part callosity (Fig. 34), opaque; metasternum elevated, disc long with moderate to coarse punctures in anterior half, midline complete at middle, lateral triangle wide, shiny on disk; abdominal sternites 2-5 finely fluted along sutures, surface of sternites with moderate, evenly spaced, minutely setigerous punctures; disc of pygidium deeply eroded and longitudinally wrinkled, median longitudinal carina and basal cups shining, apical margin thick, punctate. Profemoral surface scabrous, punctate, perimarginal groove deep; protibia with a small fourth tooth at middle (Fig. 35); mesofemur fusiform, equal in width to metafemur; metafemur with fine punctures con-



Figs 34-37. *Auperia viejoae*, sp.n.: 34 – ventral habitus; 35 – antero-lateral view; 36 – dorsal habitus; 37 – male aedeagus, lateral view.

centrated in anterior apical half; metafemoral posterior line incomplete, but only weakly so; metatibia as long as metafemur; basal tarsomere of hind tarsus equal in length to upper tibial spur. Male genitalia as in Fig. 37.

Female unknown.

R e m a r k s. *Auperia viejoae* is most closely related to *A. capitosa* (HAROLD) and *A. iquitosae* STEBNICKA, sharing similar body form and the distinctive two part, triangular mesosternal callosity. It will fall to couplet 2 in STEBNICKA's (2002) key to species and is readily distinguished from *A. capitosa* and *A. iquitosae* by its smaller body size, head with notably coarser punctures laterally than on the nearly impunctate frons, and protibia with four teeth.

DIDACTYLIINI

Genus *Aidophus* BALTHASAR, 1963

Type species *Aphodius infuscatopennis* SCHMIDT, 1909a: 12 (= *Aidophus paraguayanus* BALTHASAR, 1963: 279), by monotypy.

D i a g n o s t i c c h a r a c t e r s. Didactyliini with a smooth, unmodified pygidium and metatibial spurs not separated by basal tarsomere, differing from other didactylini by its elongate, subcylindrical body; pale body coloration, often with dark marks; prominent setae on genae, lateral pronotum and elytra margins; clypeus distinctly sinuate at middle; metatibia with reduced or obsolete transverse carina.

R e m a r k s. *Aidophus* was recently revised (DELLACASA et al. 2002) and presently contains 12 species distributed from the southeastern United States to Argentina. The Neotropical, monotypic genus *Argeremazus* STEBNICKA & DELLACASA (2004) superficially resembles a didactyline, but is considered a member of the Aegialiini (STEBNICKA et al. 2004)

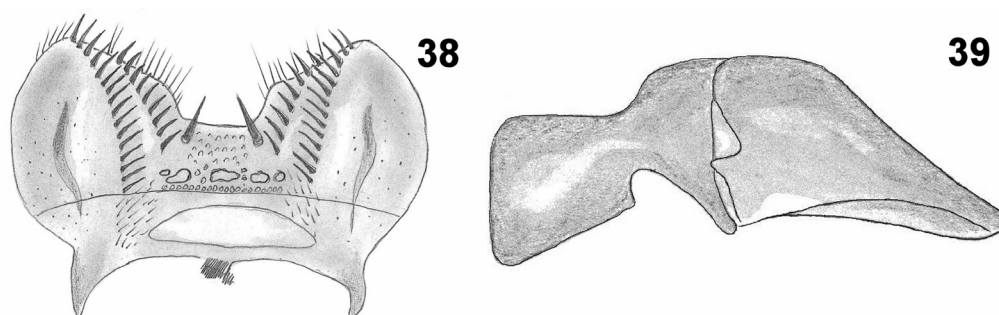
Members of *Aidophus* are frequently collected in series at light. Some museums have substantial numbers of specimens still needing work, but the superficial similarity of most species requires dissection and study of male genitalia to confirm their identity. Additional work on these and future materials will surely discover more new species. The species described below possesses unique male genitalia, being most similar to the North America species *Aidophus parvus* (HORN).

Aidophus coheni sp. n.

(Figs 38-39)

Holotype male with label data "Ecuador, Guay, Salinas, 27.II.1975, to blacklight, leg. Jeffrey COHEN" (USNM). Paratypes (92), same data as holotype (ISEA, PESC, USNM).

D e s c r i p t i o n. Length 4.0-4.5 mm. Body elongate oblong, shiny, pale yellowish brown, glabrous above; antennal club, sides and base of pronotum, second elytral interval and, in some specimens, base and fourth interval yellowish, legs testaceous. Head with small gibbosity medially, clypeus narrowly emarginate, sides nearly straight, edge slightly reflexed, genae small obtuse with clump of 3-4 long, pale setae; surface strongly shiny, with very minute punctures throughout and few very fine scattered punctures on vertex. Pronotum transverse, moderately convex, widest at base, sides arcuate, margined and fringed with widely spaced, long pale setae, posterior angles rounded, base slightly sinuate, margined; surface punctures generally fine, slightly larger punctures scattered posteriorly, closer laterally, everywhere separated by 2-3 times their diameters. Scutellum shiny, rounded apically. Elytra not quite parallel-sided, widest at apical third; striae moderately impressed with fine, shallow close punctures, intervals weakly convex, first interval narrowed apically, seventh interval elevated before apex and arcuately prolonged to third interval; surface shiny, each interval with very minute, scattered punctures. Metasternal plate in both sexes convex, polished, strongly shiny; abdominal sternites and pygidium with sparse, long setae. Legs moderate in length; basal tarsomere of metatarsus one-third longer than upper tibial spur and equal in length to following three tarsomeres combined. Epipharynx as in Fig. 38.



Figs 38-39. *Aidophus coheni*, sp.n.: 38 – epipharynx; 39 – male aedeagus, lateral view..

Male. Pronotal punctures finer than in female; abdominal sternites deplanate medially; protibia sinuate ventrally with first two teeth elongate, third tooth reduced, terminal spur parallel, incurved downward; tarsi longer than in female; genitalia (Fig. 39) with apex of parameres truncated and laterally flattened.

Female. Protibia narrower and shorter than in male with three smaller lateral teeth and fine, straight terminal spur; tarsi shorter than in male.

R e m a r k s. *Aidophus coheni* is most closely related to *A. pallax* (BALTHASAR), but can be easily distinguished from that species by its smaller size, shorter elytra and truncated parameres of male aedeagus. The new species falls to couplets 4-5 in the key to the species of *Aidophus* by DELLACASA et al. (2002), and is readily identifiable by the male genitalia (all other members have parameres apically attenuated).

E t y m o l o g y. Named in honor of its collector, Jeffrey COHEN.

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